FIELD PROJECTS II

COURSE DETAILS

Units of Credit	6
Contact hours	Average 4 hours per week
Class	Thursday, 3pm onwards Online

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INFORMATION ABOUT THE COURSE

This course builds on previous courses in years 1, 2 and 3. You should have already passed or been exempt from those courses. If you have not passed any of the year 1, 2 or 3 GMAT courses then you should contact the course convenor for advice and permission to enrol in this course.

This course changes considerably each year with new projects to challenge and educate students. In Term 2, 2020, one academic supervisor is involved. The project details are described in the course program section.

Prerequisite: GMAT3150

Monitor the class web site at moodle.telt.unsw.edu.au and your university email regularly.

HANDBOOK DESCRIPTION

https://www.handbook.unsw.edu.au/undergraduate/courses/2020/GMAT4150

OBJECTIVES

The objectives of the course are to broaden and deepen your knowledge and experience of surveying and geospatial data acquisition, surveying instrumentation and modern mobile mapping systems, field methods, and surveying and mapping software, by conducting your own survey and mapping activities at a site remote from the UNSW campus or on it. The aim is to involve you in management aspects of field survey and mapping tasks as well as gaining more experience in measurement, fieldwork design, and analysis, and to give you confidence in your ability to do survey and mapping of a type that you may not have done before at University or in employment.

This course is a capstone course in your degree.

Linking the objectives with the program outcome attributes and the assessment strategies for this course:

Objectives	Program outcome attributes	Assessment
Broaden and deepen surveying or geospatial knowledge and experience	Undertake field surveys without detailed instructions	Quality of surveying and mapping results. Quantity of surveying and mapping results. Report writing.
Management of surveys and geospatial mapping activities	Group work organised and lead by students. Ability to 'cost' the projects based on time spent on the tasks	Discussed and described in reports
Design	Design and plan the survey and mapping project, test the design by implementation	Discussed and described in reports
Self-Assessment	Each student to write a report that evaluates their performance in the course	A small component of the final mark is based on a student's self-assessment report.

This course provides an environment that fosters in our students the following attributes as listed:

the skills involved in scholarly enquiry	Significant
the skills for effective communication	Significant
an in-depth engagement with relevant disciplinary knowledge in its interdisciplinary context	Significant
the capacity for analytical and critical thinking and for creative problem solving	Significant
the ability to engage in independent and reflective learning	Significant
the skills to locate, evaluate and use relevant information (Information Literacy)	Some
the capacity for enterprise, initiative and creativity	Significant
an appreciation of and respect for, diversity	Significant
a capacity to contribute to, and work within, the international community	Some
the skills required for collaborative and multidisciplinary work	Significant

After successfully completing this course, you should be able to:

Learning Outcome	EA Stage 1 Competencies
1.	Apply surveying/geospatial knowledge learnt so far in the program to design surveys using a range of equipment to solve challenging problems.	PE1.1, PE1.5, PE2.1, PE2.2, PE3.3
2.	Manage a team to solve problems, meet deadlines with appropriate outcomes and communicate these results in report form and/or via a	PE1.5, PE2.4, PE3.2, PE3.5, PE3.6

3. Analyse and assess data and produce suitable surveying and geospatia

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Objectives

Major objectives of this project are:

    To understand the concept of geospatial digital twins;

    To acquire new surveying and mapping skills with mobile mapping systems;

    To enhance and ext

Assessment Criteria are as follows:

Project team (group) report (25%) will be assessed based on the following criteria:

      Written presentation 2%
      Literature Review 5%
      Measures to follow the social distancing rules in field work 5%
      Initial field testing and analysis 5%
      Project team working plan for various application case studies 8%

Class presentation (15%) (a separate document will describe the details)

Final (individual) report (50%) will be assessed based on the following criteria:

      Written presentation 5%
      Review of other work 5%
      Quality of project work (design and justification of the case study) 10%
      Workflows, results and interpretation 10%
      Conclusions and recommendations 10%
      Documenting and archiving the full project field notes and data sets 10%

Individual self assessment (10%) will be assessed based on the following criteria:

      Written presentation 2%
      Quality of self assessment 8%

Note:

1) If a student is unable to submit on time due to illness or other legitimate reason, then a brief written explanation must be given to the lecturer for consideration as soon as is feasible. In some cases the lecturer may grant an extension to the submission date provided he has been contacted before the due date. Otherwise, the marks for late submissions will be reduced: -10% (of the maximum mark) for each day late.
2) The course coordinator reserves the right to adjust the final marks by scaling if agreed to by the Head of School.
3) No Final Exam/Supplementary Examinations for this course.

RELEVANT RESOURCES

DATES TO NOTE

Refer to MyUNSW for Important Dates available at:

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PLAGIARISM

Beware! An assignment that includes plagiarised material will receive a 0% Fail, and students who plagiarise may fail the course. Students who plagiarise are also liable to disciplinary action, including exclusion from enrolment.

Plagiarism is the use of another person's work or ideas as if they were your own. When it is necessary or desirable to use other people's material you should adequately acknowledge whose words or ideas they are and where you found them (giving the complete reference details, including page number(s)). The Learning Centre provides further information on what constitutes Plagiarism at:

https://student.unsw.edu.au/plagiarism

ACADEMIC ADVICE

(Formerly known as Common School Information)

For information about:

> Notes on assessments and plagiarism,

Appendix A: Engineers Australia (EA) Competencies

Stage 1 Competencies for Professional Engineers

	Program Intended Learning Outcomes
PE1: Knowledge and Skill Base	PE1.1 Comprehensive, theory-based understanding of underpinning fundamentals
	PE1.2 Conceptual understanding of underpinning maths, analysis, statistics, computing
	PE1.3 In-depth understanding of specialist bodies of knowledge
	PE1.4 Discernment of knowledge development and research directions
	PE1.5 Knowledge of engineering design practice
	PE1.6 Understanding of scope, principles, norms, accountabilities of sustainable engineering practice
PE2: Engineering Application Ability	PE2.1 Application of established engineering methods to complex problem solving
	PE2.2 Fluent application of engineering techniques, tools and resources
	PE2.3 Application of systematic engineering synthesis and design processes
	PE2.4 Application of systematic approaches to the conduct and management of engineering projects
PE3: Professional and Personal Attributes	PE3.1 Ethical conduct and professional accountability
	PE3.2 Effective oral and written communication (professional and lay domains)
	PE3.3 Creative, innovative and pro-active demeanour
	PE3.4 Professional use and management of information
	PE3.5 Orderly management of self, and professional conduct
	PE3.6 Effective team membership and team leadership